

CLAIMS

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

- 1 1. A method for executing integration activity chain for on demand business
2 process integration comprising the steps of:
3 receiving integration activity's properties for execution from an event
4 bus;
5 parsing events from a received data string;
6 controlling integration activity execution through consulting on
7 demand business collaboration ontology and an access control utility;
8 coordinating with an exception handler when there is a business
9 exception which comes from integrated applications; and
10 performing integration activity execution by invoking adaptation
11 layers.
- 1 2. The method for executing integration activity chain for on demand business
2 process integration recited in claim 1, wherein the integration activity chain
3 represents a set of activities in a pre-defined manner.
- 1 3. The method for executing integration activity chain for on demand business
2 process integration recited in claim 2, wherein the pre-defined manner is
3 represented in to a work flow document and the said ad-hoc manner is the
4 non-deterministic activities triggered by manually operation or by program
5 code automatically in multi-step manner.

1 4. The method for executing integration activity chain for on demand business
2 process integration recited in claim 1, wherein the integration activity chain
3 represents a set of activities in an ad-hoc manner.

1 5. The method for executing integration activity chain for on demand business
2 process integration recited in claim 1, wherein the event bus comprises a XML
3 string, plain text, binary data stream, or graphic user interface events.

1 6. The method for executing integration activity chain for on demand business
2 process integration recited in claim 1, wherein said integration activity's
3 properties are the integration activity's name, description on the integration
4 activity, scheduled execution script, pre-integration activity, post-integration
5 activity, and execution channel.

1 7. The method for executing integration activity chain for on demand business
2 process integration recited in claim 1, wherein said adaptation layers include
3 adaptation components associated with business applications.

1 8. The method for executing integration activity chain for on demand business
2 process integration recited in claim 7, wherein said business applications
3 include Reliable File Transfer Protocol (RFTP).

1 9. The method for executing integration activity chain for on demand business
2 process integration recited in claim 7, wherein said business applications
3 include File Transfer Protocol (FTP).

1 10. A method for managing integration activity chain for on demand business
2 process integration comprising the steps of:

3 storing integration activity annotation into integration activity
4 ontology;
5 retrieving integration activity annotation from integration activity
6 ontology;
7 adding new integration activity annotations without changing the
8 existing integration activities' behaviors; and
9 removing existing integration activity annotations without changing
10 the other integration activities' behaviors.

1 11. The method for managing integration activity chain for on demand
2 business process integration recited in claim 10, wherein the integration
3 activity annotation includes links to different applications, condition
4 relationship, activity name, security handler, source, destination, and linkage
5 between integration activities.

1 12. A method for integrating integration activity chain with existing business
2 applications for on demand business process integration comprising the steps
3 of:
4 providing a uniform interface for connecting legacy business
5 applications with the existing business collaboration solutions; and
6 integrating an access control utility that conducts security checking.

1 13. The method for integrating integration activity chain with existing
2 business applications for on demand business process integration recited in
3 claim 12, wherein said uniform interface is represented by Web services
4 definition language (WSDL).

1 14. The method for integrating integration activity chain with existing
2 business applications for on demand business process integration recited in
3 claim 12, wherein said access control utility checks the authorization of all
4 access to the resources or applications integrated and managed through an
5 integration activity manager ensuring all access are authorized.

1 15. A signal-bearing medium tangibly embodying a program of machine-
2 readable instructions executable by a digital processing apparatus to perform a
3 method of managing a set of integration activities, said method comprising the
4 steps of:
5 executing integration activity chain for on demand business process
6 integration;
7 managing integration activity chain for on demand business process
8 integration; and
9 integrating integration activity chain with existing business
10 applications for on demand business process integration.

1 16. A data processing system for managing integration activity chain for on
2 demand business process integration comprising:
3 a database storing integration activity annotation into integration
4 activity ontology; and
5 an action manager retrieving integration activity annotation from
6 integration activity ontology, adding new integration activity annotations
7 without changing the existing integration activities' behaviors, and removing
8 existing integration activity annotations without changing the other integration
9 activities' behaviors.

1 17. The data processing system for managing integration activity chain for on
2 demand business process integration recited in claim 16, wherein the
3 integration activity annotation includes links to different applications,
4 condition relationship, activity name, security handler, source, destination, and
5 linkage between integration activities.

1 18. The data processing system for managing integration activity chain for on
2 demand business process integration recited in claim 16, further comprising a
3 uniform interface connecting legacy business applications with existing
4 business collaboration solutions, and wherein said action manager includes an
5 access control utility that conducts security checking.

1 19. The data processing system for integrating integration activity chain for on
2 demand business process integration recited in claim 16, wherein said uniform
3 interface is represented by Web services definition language (WSDL).

1 20. The data processing system for integrating integration activity chain for on
2 demand business process integration recited in claim 16, wherein said access
3 control utility checks the authorization of all access to the resources or
4 applications integrated and managed through an integration activity manager
5 ensuring all access are authorized.